

News writers (and editors) meeting today at 1:00 PM.

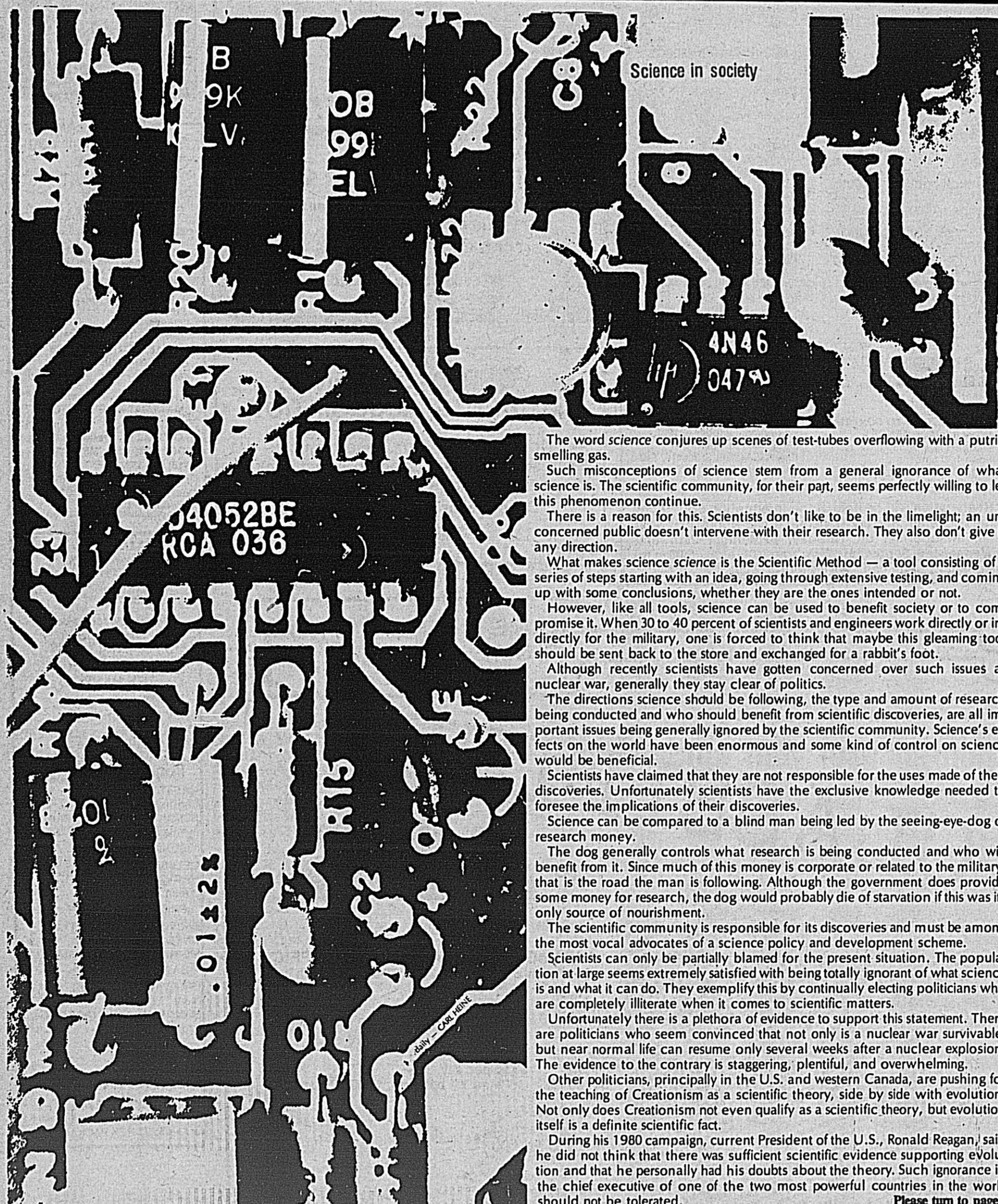
THE MCGILL DAILY

Staff meeting tomorrow at 2:00 PM in the Daily office (rm. B03). All welcome and invited.

Vol. 72, No. 12

Wednesday, September 29, 1982

Montréal



Science in society

The word *science* conjures up scenes of test-tubes overflowing with a putrid smelling gas.

Such misconceptions of science stem from a general ignorance of what science is. The scientific community, for their part, seems perfectly willing to let this phenomenon continue.

There is a reason for this. Scientists don't like to be in the limelight; an unconcerned public doesn't intervene with their research. They also don't give it any direction.

What makes science *science* is the Scientific Method — a tool consisting of a series of steps starting with an idea, going through extensive testing, and coming up with some conclusions, whether they are the ones intended or not.

However, like all tools, science can be used to benefit society or to compromise it. When 30 to 40 percent of scientists and engineers work directly or indirectly for the military, one is forced to think that maybe this gleaming tool should be sent back to the store and exchanged for a rabbit's foot.

Although recently scientists have gotten concerned over such issues as nuclear war, generally they stay clear of politics.

The directions science should be following, the type and amount of research being conducted and who should benefit from scientific discoveries, are all important issues being generally ignored by the scientific community. Science's effects on the world have been enormous and some kind of control on science would be beneficial.

Scientists have claimed that they are not responsible for the uses made of their discoveries. Unfortunately scientists have the exclusive knowledge needed to foresee the implications of their discoveries.

Science can be compared to a blind man being led by the seeing-eye-dog of research money.

The dog generally controls what research is being conducted and who will benefit from it. Since much of this money is corporate or related to the military, that is the road the man is following. Although the government does provide some money for research, the dog would probably die of starvation if this was its only source of nourishment.

The scientific community is responsible for its discoveries and must be among the most vocal advocates of a science policy and development scheme.

Scientists can only be partially blamed for the present situation. The population at large seems extremely satisfied with being totally ignorant of what science is and what it can do. They exemplify this by continually electing politicians who are completely illiterate when it comes to scientific matters.

Unfortunately there is a plethora of evidence to support this statement. There are politicians who seem convinced that not only is a nuclear war survivable, but near normal life can resume only several weeks after a nuclear explosion. The evidence to the contrary is staggering, plentiful, and overwhelming.

Other politicians, principally in the U.S. and western Canada, are pushing for the teaching of Creationism as a scientific theory, side by side with evolution. Not only does Creationism not even qualify as a scientific theory, but evolution itself is a definite scientific fact.

During his 1980 campaign, current President of the U.S., Ronald Reagan, said he did not think that there was sufficient scientific evidence supporting evolution and that he personally had his doubts about the theory. Such ignorance in the chief executive of one of the two most powerful countries in the world should not be tolerated.

Please turn to page 9

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Registration will be held at the Information Counter of the Students' Society General Office, Room 105, 3480 McTavish Street on **Tuesday, September 28th** and **Wednesday, September 29th** from 9:00 a.m. - 5:00 p.m. For information call: 392-8930 or 392-8922.



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celebrations (including dinner)

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Sharing of Ideas, meal
SEUDAT SHLISHIT 6:00pm
evening celebrations

SUNDAY, OCT. 3

CELEBRATING THE HARVEST
Lunch 9:30am

FRIDAY, OCT. 8

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MEAL 6:00pm**

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Science writers meeting today at 3:00 in Union B03.

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SAC sacked?

by Nancy D. Kingsbury

The structure of the South Africa and El Salvador committees have been drastically changed by our Students' Society executive. The prime personage in this scenario is the Vice President External Affairs, Benji Trister.

Apparently Students' Society regarded the previous structure and actions of the committees as unparliamentary and inefficient. Trister seems especially displeased with the policy of open (floating) membership that the groups previously practiced.

"Floating membership made it difficult for the South Africa Committee (SAC) to follow Robert's Rules of Order or other Students' Council procedures", he says.

Under SAC's new terms of reference, the committee has a fixed voting membership instead of open voting rights for all members. SAC's actions will now be controlled by a group including Trister, the undergraduate representative to the Board of Governors, a representative from the Senate student caucus, and another student appointed by the President's Council. The undergraduate representative to the Board of Governors will be elected in a by-election next month.

According to Trister, under the committee's new Students' Society guidelines, SAC will have a larger number of potential voting members. "A positive effect of the new SAC is that members of the McGill Senate are now ex-officio members of the South Africa Committee", said Trister.

"They (student senators) have a responsibility to represent SAC," Trister adds.

Some members of the old SAC, such as chairperson Elise Moser, wonder if pro-divestment ideas will really be represented by student senators.

"We don't anticipate divestment ideas being as well articulated this year," says Moser.

Trister countered this allegation stating that those ideas were not well-represented by SAC in the past.

Last year, according to Trister, the undergraduate rep to the Board of Governors (BoG) was never approached by students interested in having the university divest its holdings in South African corporations. "The student BoG members have not been effectively lobbied by SAC in the past" Trister said.

Trister concluded his interview with the *Daily* by saying that Students' Society has not received an unfavorable response from the affected committees. "The SAC has indicated no reaction (to their change in status), and no one else has complained either," he said.



Give blood today

daily — RICH FLINT

Henri-Paul Vignola, Municipal Action Group Candidate for Montréal mayor, accidentally happened to show up at the McGill Blood Drive yesterday. He also accidentally happened to phone about fifteen campus groups to accidentally mention that he might be dropping by. He accidentally suggested that they bring along a camera. Upon departing he accidentally left hundreds of his leaflets lying about.

Enrolment up at McGill in Arts and Science

by Albert Nerenberg

In Canada, youth employment is at a record low; in the job market, technical trades provide more openings; but at McGill, it appears more students are opting for loftier pursuits.

Statistics released by the University administration show that the recent trend towards declining enrollment in Arts and Science has been reversed.

196 more students enrolled in Science this year than last, while there were 310 more in Arts,

translating into a 8.7 per cent and 6.6 per cent increase respectively. McGill's total enrollment for full-time students rose from 15,039 last year to 15,485, an overall 3.3 per cent increase.

The jump in Arts and Science enrollment caught McGill administrators by surprise.

According to Principal David Johnston: "It was thought these faculties (Arts and Science) would shrink."

The Dean of Science, Dean Svern Orvig, said the increase in Science had not been foreseen.

"Our guess was that it would stay the same as last year," he said.

Orvig believes the faculty will benefit from the increase in students.

"It's a good thing for Science," he said. "We can han-

dle more students than we have. It's a sign that science is becoming more popular."

According to Orvig, the enrollment increase may be related to the current high rate of youth unemployment. Please turn to page 14

Tenants may lose funding

by Peter F. Kuitenbrouwer

Between four and twelve tenants' associations in Montréal are in danger of losing funding from Centraide, which is by far their biggest contributor.

The Côte Des Neiges, Longueuil, Notre Dame de Grace, and Villeray tenants' associations will not receive Centraide funding as of April 1, 1983, unless they obtain a registration number from the federal government to qualify as a charitable organisation, said Marie Bourgeois, public relations person at Centraide. Charitable organisations are eligible to receive tax-free funding.

Centraide said it used to overlook the registration stipulation, but that the federal government had recently become strict. "(The tenants' associations') charters, which are 15 or 20 years old, do not qualify them for funding," said Bourgeois.

The associations generally work at organising renters in Montréal to protect tenants from greedy or negligent

landlords. Apparently the federal government feels Montréal's tenants' associations are involved in politics as well as community aid because of their lobbying activities to change legislation. As political groups, Ottawa says, they cannot qualify for tax-free funds.

"(The government) think that we are not uniquely charitable because we have presented memos to them, and our services are not to benefit everyone," said André Petit of the Association des locataires de Longueuil.

"But if we can't be registered for that reason, then nobody should get charitable registration," he said.

Other organisations, he said, while currently labelled charitable by Ottawa are engaged in more overt political activities. "The Commission provinciale des malades lobbies for the abolition of strikes in hospitals," he said.

"The Front commun pro-vie have political objectives. The Jeunes Canadiens pour la Please turn to page 14

Walk-home service begins this Friday

by Molra Ambrose

This Friday evening, an escort service is being started by concerned students to voluntarily walk women home to residence or the ghetto after Gertrude's closes.

The escort service, the brainchild of Brian O'Connell, Douglas Hall's representative to the Inter-Residence Council (IRC), is being initiated on purely a trial basis.

"We want to try it for one week and see what the turn-out is. This week the ten guys doing it are all my friends and are volunteering for the evening," said O'Connell.

According to IRC President Ted Alpert, if the service is well-received, IRC will organize it on a weekly basis and pay for any expenses. A regular schedule will be drawn up and a phone

monitored so women can call in for an escort. Women just wait where they are for the escort to arrive.

The service will be operating primarily between midnight and 2 a.m. This Friday the service will operate from O'Connell's residence suite. A women will answer the phone and send escorts to the Union. The number for the escort service will be posted outside Gertrude's.

O'Connell stresses that the escort service is purely out of concern for safety. Women should not worry about sexual advances.

Fraternalities sponsored a similar escort service two years ago when several rapes occurred in the ghetto. Although according to campus security, there has actually been a decrease in

crime on campus, students are still concerned about safety in the area.

"We just don't want to take any chances," said O'Connell.

O'Connell decided to start the escort service when a women friend of his refused to come to parties in residence because she was afraid of walking home.

"A friend of mine in the ghetto didn't like walking up the hill and I figured that other women would feel the same," he said.

Escort services have operated at Queens University and the University of Guelph for several years. McGill's service will be available to women walking in approximately a ten-minute radius from the campus.

Posters publicizing the service will be posted in all residences and in the Union.

Founded in 1911

THE MCGILL DAILY

"I never let my schooling interfere with my education"
— Mark Twain

Keep SAC alive

Lest anyone think otherwise, let it be known that our Student Society executives were not entirely inactive this summer.

While we weren't looking, Msrs. Williams, Hicks, and Trister were busy reorganizing the formerly open structures of the South Africa and El Salvador support committees.

Under the new terms of reference for these groups, the South Africa Committee (SAC) will be reduced from a political group open to any student, to a puppet branch committee of Students' Society. Its new format will centralize the authority of a previously collectively run organization. The new structures will prevent most active members from having a vote.

In spring 1981, SAC was able to organize several hundred students and professors in demonstration against the Board of Governors policy of investing in South African companies.

This spring, SAC was again able to organize a large demonstration in front of the Sherbrooke Street branch of the Bank of Montréal to protest their policy of South African investment. Most impressively, SAC gathered over 3,000 signatures earlier this year on a petition calling for McGill's immediate divestment.

Yet, even with the pro-divestment support shown by McGill students, Bruce Williams and Hicks felt free to change SAC to a political group that now must get the approval of the entire Students' Society executive committee before writing a petition, booking a room for a movie, or inviting a speaker to the campus.

With the overwhelming support shown for the SAC and their stated goal of convincing our University to break financial ties with the white racist state of South Africa, how can our present executive justify their actions?

It's no secret that the majority of the executive are not great fans of what they deem 'political' issues: no matter that divestment is supported by most churches, human rights groups and international organisations such as the United Nations. The McGill Departments of Anthropology and Religious Studies have also supported divestment. The Department of English Students' Association and the Religious Studies Students' Association have both withdrawn their funds from the Bank of Montréal in support of divestment policy.

However, the campaign has been viewed by our present leaders as something that doesn't fit into their beer and pizza image of Student activities.

What should concern all students is the methods used in the present assault on the divestment campaign. Whether the Board of Governors thinks so or not, and whether the Students' Society thinks so or not, divestment is a real issue at McGill.

Few other issues over the years have produced such a sustained response and amount of political action as divestment.

Our participation at McGill in the maintenance of the racist apartheid regime in South Africa — however minimal or indirect some say it is — must end. McGill students and professors have said just that in recent years through their words and actions.

Yet, despite the obvious support for divestment, the Williams, Hicks, and Trister trio are trying to smother the South Africa committee in bureaucratic alterations. They are presenting the move as a simple housekeeping act. They claim no hostility to the cause of divestment, just a desire to make sure that Robert's Rules of Order are fanatically observed by SAC.

If students voted for anything last spring, they voted for an executive committee that would be above-board and considerate of students' priorities. They did not vote for backroom politics, or Robert's Rules of Order. If the current structures are accepted by Students' Council, it will be a defeat for freedom of speech and common sense and a victory for small-mindedness.

We can only protest the obvious politically partisan motives behind the reorganization of SAC. A reorganization whose goal appears to be the muzzling of pro-divestment ideas.

Such actions on the part of our student government cannot be condoned. As elected officials they have the right to initiate political action, if such action is openly discussed and debated and handled openly.

Political tactics are usually a reflection of political goals; if present trends are anything to go by, our student leaders are working for a secretive organisation that smothers dissent under tons of reports and mountains of procedure.

The staff of the McGill Daily
Adopted unanimously Sept. 22, 1982



Hyde Park

After considering the Executive Committee's proposed Terms of reference, the El Salvador and South Africa Committees would like to propose alternative terms which we believe would be to the general good.

We would like to start by reiterating something which, although not part of the document itself, has been a matter for discussion. The purpose of new Terms of Reference, according to the Executive Committee, is to strengthen the ties between itself and our committees. We support and encourage this strengthening wholeheartedly; further, we call for more frequent and more effective consultation between these bodies in the future, and more guidance from the Student Council in policy-making.

We endorse Article 7.0 of the proposed Terms, that the Chairperson of each committee present an annual report of the year's activities to Council.

We endorse the Terms applying to financial regulation, item 6.0, proposing that the finances of the committees be controlled by Students' Society, specifically by the Vice President for External Affairs. As agents of student opinion we consider ourselves (and always have) accountable to all students for all of our financial transactions.

We endorse Article 5.0, regarding the use of Robert's Rules of Order in all procedures.

We endorse term 4.0, stipulating that meetings be called and chaired by the Chairperson or Vice President for External Affairs.

In good conscience, and bearing in mind that we are representative of all students, we must raise objections to two of the eight items under Article 3.0, Membership.

The first objection stems from a consideration of the physical demands of the Chairperson's job, and of the physical limitations of

any individual. Regarding item 3.1.1, the appointment of a councillor as Chairperson, we feel that the position of Chairperson is a great responsibility, demanding a significant amount of time and energy. We suggest that any student with other major commitments, especially something as important as Student Council, ought not to be burdened with other duties of such magnitude. It is not fair to the individual, nor is it appropriate for either committee, both of which need full time commitments from their Chairpersons. We propose, alternatively, that the Chairperson be a student who is not a councillor.

The second objection is a matter of principle. We believe that it will also affect the morale of our committees. Item 3.2 states (or implies) that only eight members of each committee may vote; all other members are classed "non-voting". Both the El Salvador and South Africa Committees have heretofore been run as participatory democracies. We cannot endorse a structure which allows them to be run by a mere handful of people. We cannot accept any structure which denies any member the fundamental right to participate in the decision-making process. We propose that every member of each committee be allowed the right to vote.

We endorse term 2.0.

We endorse term 1.0.

These alternative terms of reference will be presented at the Students' Council meeting, Wednesday, Sept. 29 at 6:30 p.m. in room L234. We ask all members of the McGill community who endorse these alternative proposals to attend and show their support.

The McGill El Salvador Committee
The McGill South Africa Committee

Science Edition: Science in society

Research at McGill

by Ingrid Birker

There was practically no science at McGill before Sir John William Dawson arrived in 1855 as third principal. Apart from two scanty courses of chemistry and botany offered through the Faculty of Medicine, students were firmly entrenched in a general arts course solidly based in classical culture.

Composed of ten separated departments, the faculty of science offers a wide variety of degree and diploma programmes. Courses range from Carl Sagan-like lecture demonstrations on the physics and psycho-physics of music to advanced study in abnormal and clinical psychology.

Of course getting a B.Sc. does not simply involve watching displays on the magic of chemistry.

According to Michal Praiss, a foreign student completing her final year in ecology "the weed-out courses in the first year really push you, but I feel I'm getting a good education."

She is not alone. According to a Biology department survey of 550 graduates run in 1979, 75 percent of the respondents regarded possession of their B.Sc.'s as important. From this group half were employed and half were pursuing post-graduate work.

"There's very little I could do with a B.Sc. so I'm going to graduate school," Praiss said. "Most people I know have further studies on their mind," she added.

Physics

"When economics are hard people stay in school longer: they might as well learn something," said S.K. Mark, Chairman of Physics.

Although graduate enrollment is half of that of the early 60's, Mark said physics is a very lively field of study at McGill, especially with all the new discoveries in recent years. Research efforts in the department centre around high energy, nuclear, solid state, atmospheric and ice physics.

Due to the high cost of equipment and the scale of experiment, "suitcase physics" occurs when high energy physics experiments are done in collaboration with scientists from other institutions such as the Fermi National Laboratory near Chicago or the European Center CERN in Geneva.

Nuclear physics activities on-campus revolve around McGill's cyclotron and the development of new laser technology to be used in nuclear, atomic and molecular physics. A new form of solid (metallic glass) first fabricated here, is being actively explored in the condensed matter labs. McGill is also well-known for its weather radar and exploration of the Arctic.

"Our physicists are primarily interested in fundamental research, but because of the nature of our experiments we are constantly developing new techniques which are of immediate benefit to society," said Mark. "For example, physicists invented and were using the mini-computer way back in the 50's."

Spin-offs of nuclear physics include the high quality Positron Emission Brain

Tomography scanner at the Montréal Neurological Institute. Pioneered under Dr. Lucas Yamamoto, this revolutionary new technology enables doctors to watch, for the first time without surgery, the functions of the brain in conscious patients. Yamamoto first came to Mark in 1975 requesting rare Xenon gas for his initial experiments, however Mark suggested a short-lived Krypton isotope produced by the cyclotron. This beamed open the frontiers of three-dimensional brain mapping.

Meteorology

In the frontiers of atmospheric science, Canada's only full-fledged Department of Meteorology offers undergraduates a chance to apply physics to practical problems such as weather forecasting, pollution problems and the question of climate change.

Ever since the construction of a small observatory in 1856 (on the site now occupied by Leacock) weather reporting and research has tornadoed at McGill. Until the late 1920's Meteorologists operating from the observatory provided time signals to the railways and government services in Ottawa as well as weather readings to the Canadian Meteorologists Service in Toronto.

Today, although no longer involved in time-keeping, meteorology graduates and faculty work on precipitation physics from the McGill Radar Weather Observatory, a familiar landmark north of the Trans-Canada Highway in St. Anne de Bellevue. They also conduct research in dynamic meteorology with Canada's main forecast office in Dorval, the Canadian Meteorological Centre.

"We claim all meteorology graduates have no difficulty in finding professional employment," said Chairman R. Rogers. "Jobs are so plentiful, either with the main employer, the Atmospheric Environment Service of Canada, or provincial governments and private environmental firms, that the Department finds itself competing with employers for good graduate students."

Geology

Other McGill science graduates staying clear of the unemployment line are geologists, totting either a B.Sc. or M.Sc.

"Both the mineral and petroleum exploration industries prefer the Master's level graduate," said Geology Chairman Colin Stearn. "According to a recent government survey, McGill geology graduates are among those most sought after by both petroleum and mining companies," he added.

At all academic levels, Stearn maintains McGill "aims to turn out a professional geologist who can step into an industrial job".

Graduates who choose further studies, either in programs leading to an M.Sc. or programs leading to an M.Sc.(Applied) in Mineral Exploration or Engineering Geology, train in theoretical aspects of the science and may analyse microscopic grains of a mineral in the new electron microprobe, model the chemistry of the earth's crust on a computer, or predict the distribution of Alberta's oil reservoirs.

Oceanography

Moving from terra firma to H₂O, in a department established strictly for

graduate studies, the McGill Institute of Oceanography stresses interdisciplinary research often supported by agencies as diverse as the World Wildlife Fund or the James Bay Energy Project.

"Our scientists are not limited at all. That is a myth fostered entirely by the media," said the Institute's founder, Dr. M.J. Dunbar. "Oceanography is not that way at all; our research has vitally important practical applications."

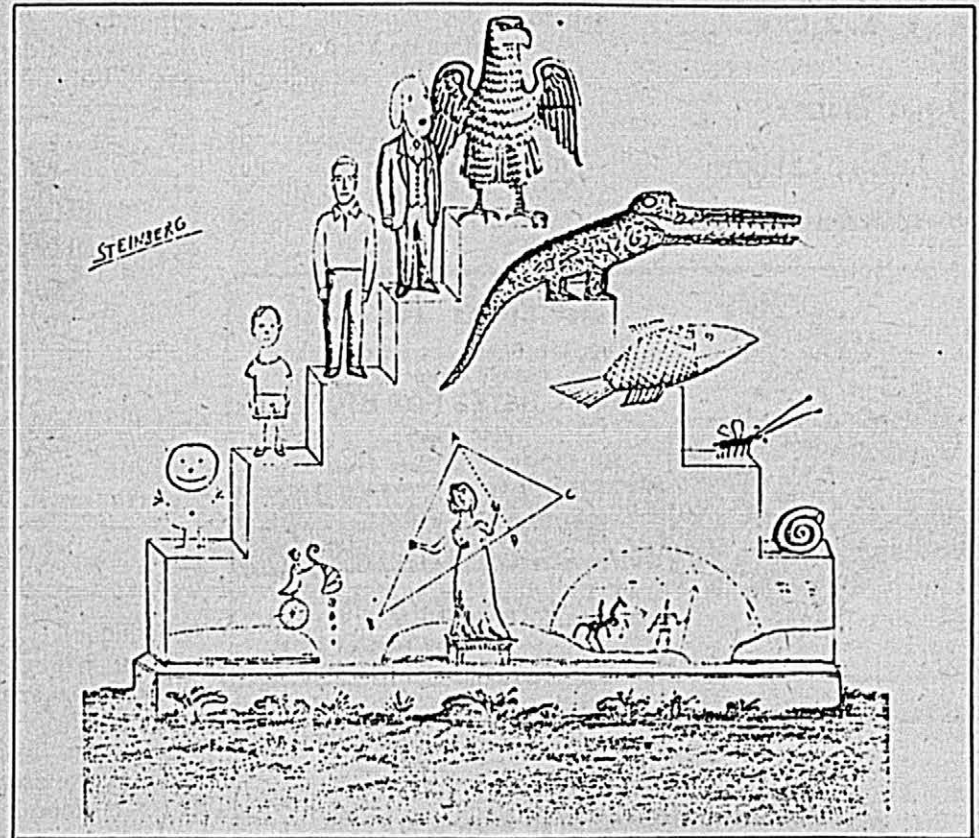
Current streams of study include the following:

- Pollution studies of the coral reefs in Barbados,

research in southern Québec, especially in the urban field, and research in the tropical world.

Other planes of investigation map environmental changes, including the incidence of acid rain and acid snow, which are partly based on field work at a sub-arctic research station in Schefferville. Working in close liaison with meteorologists and northerners, geographical climatologists here have discovered that the etching rain produced outside the province travels into central and northern Québec where it is gradually acidifying the ground water supply because there is no limestone buffer in that area.

"Geography is a real world discipline," said Bird. "Once you acquire and analyze the data you are never very far from the applications."



- Estuarine and coastal analysis of a proposed hydro-electric development site in Hudson's Bay,
- Ice core examination after a small experimental oil spill by Dome Petroleum in McKinley Bay, N.W.T.,
- Sedimentological surveys of an estuary to be drained by the James Bay Project,
- Ecological measurement of a coastal population of Arctic fox feeding on young seal pups rather than lemmings in the tundra,
- Examination of Arctic fauna such as crustaceans, cod, birds and mammals associated with ice diatoms (single-celled algae).

First discovered at McGill in 1960, ice diatoms have attracted a lot of attention. Dunbar anticipates further diatom research to delve into the effects of oil spills in these sites or an investigation of diatom use to the indigenous peoples.

Geography

Basically frigid until very recently, the Arctic is now considered a region of high national priority. Along with Dunbar and ice physicists remotely sensing the Beaufort Sea, Chairman J.B. Bird of Geography claims his department "almost grabbed the physical geography of the North and wrote the first major publications on the topic."

Although Bird reflects this move as "good and applauded", the department was not balanced and in the 60's broadened their studies to include human geography of the north,

Parasitology

Four-hundred kilometres north of the Schefferville geographers, atop a plateau of many small relic arctic lakes, a core team of four researchers led by Dr. M.A. Curtis from McGill's Institute of Parasitology meticulously studies a fish tape worm negatively affecting arctic char.

"When I first came here I was looking for a practical problem that could be worked on," said Curtis. "My feeling as a biologist is that theoretical things are challenging but practical problems are equally challenging and have important theoretical applications to science as a whole. Even though its just worms and fish its as close to high science as any ecological work that can be done from a desk."

An already limited northern resource, sea run Arctic Char are now fished at the maximum the stocks can withstand. However in lake populations, the char are full of worms and stunted, a problem the Inuit have known for centuries. Curtis decided that in order to shift the emphasis from sea run Arctic char to lake fishing, the parasite had to be controlled and the lake's food supply enhanced.

"The solution is mindlessly simple but it may work," he said. "Our tricks include teaching the char not to eat the infected food supply and carefully fertilizing the lake."

However ecological wizardry is a Please turn to page 12

Édition de science: science dans la société

Science et religion une controverse

par Bianca Tessier-Lavigne

Les origines de la science. Comment concevoir l'humanité sans y incorporer un aspect scientifique. Nul ne peut mettre de côté tous les éléments chimiques qui composent la terre, l'eau, les matériaux et végétaux. Comment peut-on associer la religion, ce phénomène tout à fait spirituel, avec la science, phénomène entièrement organique?

Les liens entre la religion et la science existent depuis des millénaires. Effectivement, les égyptiens vénéraient le soleil, l'eau et tous genres de composants naturels. Leur croyance incorporait de même le cycle naturel des différents Dieux, leur contribution à la prospérité économique et démographique.

Mais l'époque florissante de l'interaction de ces deux éléments ne peut qu'être attribuée à Pythagore. Pythagore,

en effet, s'est fortement penché sur tous les mécanismes du fonctionnement de la terre. En introduisant sa théorie des sons diversifiés en accordance avec les harmonies, Pythagore a de même créé la première forme de fraternité, qui associait le mysticisme religieux avec le rationalisme scientifique. C'est une issue paradoxale du fait que l'on tente de juxtaposer deux éléments, qui par essence sont des entités opposées, mais ce phénomène se perpétuera tout au long de l'histoire, revenant avec plus ou moins d'impact suivant l'importance qui leur sont attribués.

Nombreux sont les philosophes qui tentèrent de promulguer leurs différentes doctrines, hédonistes ou non, par le biais de leurs tentatives

dieux olympiens, par les aspects bachiques et orphique de leur culture, Aristote est le premier à établir une religion monodéiste, qui condamne toute forme de fétichisme et d'adulation. Platon avait déjà formulé cette idée, mais Aristote la soutient par procédé mathématique.

Il introduisit une notion de corps célestes parfaits et immuables. Il rejetait tout changement et c'est par cette idée subjective qu'Aristote s'implanta dans les concepts qui dominèrent la période du Moyen-Âge.

Un grand bond dans l'histoire, et nous nous retrouvons au 12ème, 13ème, 14ème etc... Siècles.

Dans les monastères, couvents, une petite masse

De fait Copernic n'est pas très intéressant quant à son oeuvre, vue la non validité de ses arguments, mais du moins il avait révisé tous les chiffres qui avaient été avancés par Ptolomé. C'est de ses chiffres dont avait besoin Kepler.

Mais, ce qui est plus important, est le fait que Copernic est un des premiers «scientifique» à entretenir de bonnes relations avec l'église catholique... pour la simple raison qu'il faudra attendre sa mort pour voir imprimer son oeuvre.

Il est fort dommage de constater combien fut laissé sous silence l'oeuvre de Kepler. Ce dernier est l'action motrice qui mit en mouvement les forces intelligentes du cerveau Galilé.

Et c'est maintenant que nous pouvons voir combien les catholiques étaient réticent à considérer une évolution des sciences. Pourquoi?

La science telle que formulée et enseignée dans le traditionalisme aristotélicien, permettait à l'église d'assumer une complète dictature sur les pensées des masses paysannes et populaires. En présentant un système nouveau qui remettait en cause tous les fonctionnements mathématiques de la terre, les ordres religieux n'ont pu qu'exprimer leur désarroi et désaccord. De fait, la Bible trouvait ces sources dans le monodéisme de Platon et d'Aristote.

Donc, lorsque Galilée intervient, il se heurte à un mur de glace, et une réfutation intempestive de la part du pouvoir papal. Et il est important de constater qu'à cette époque, l'Eglise était le pouvoir. D'où le scandale du procès de Galilée et la répudiation de ce dernier. Mais en étant un peu plus objectif, il faut avouer qu'il aurait plutôt mérité d'être brûlé vif car il était un plagiatiste de première classe.

La religion et la science se déclaraient donc mutuellement la guerre. Ou plus précisément, le catholicisme et la religion. Brave Luther. Il ne savait point quel grand bien il allait faire à l'humanité en prêchant la condamnation de l'autoritarisme de la doctrine romaine catholique. Il incitait donc tout nouvel esprit à formuler ses pensées faisant place à la tolérance.

Dans une toute autre perspective, les britanniques poussèrent plus en avant les développements au sein de la Société Royale. C'est ainsi que nous voyons évoluer Newton, Bacon et tous les membres de la Société Royale.

Mais ne sautons point les étapes. La prédominance des protestants sur les catholiques dans l'Europe savante moderne peut être mise en rapport avec trois éléments principaux de la situation d'alors: une certaine conformité entre l'éthique protestante initiale et l'attitude scientifique, l'utilisation de la



scientifiques.

Avant Pythagore, Thales de Miletus, Anaximandre et nombreux philosophes de l'époque antique ont utilisé leurs conceptions philosophiques pour tenter d'expliquer leurs nombreuses et disparates ainsi que paradoxales théories.

Mais c'est Pythagore qui a vraiment mis en cause l'ambiguïté des relations religion-science. C'est le premier à comprendre que le langage, le fonctionnement du monde se traduit par un langage et des données mathématiques. Ces idées avaient déjà été formulées par l'égyptien Ahmès.

Après Pythagore, apparaît Aristote, qui définitivement changera les conceptions fondamentales religieuses et scientifiques. Effectivement, si essentiellement les gens étaient subjugués par la multitude des

privilegiée apprend les différents écrits de l'antiquité. Au premier plan: Aristote. Toute autre analyse de la science est utilisée dans le but de soutenir la véracité des dires d'Aristote. Est considéré hérétique toute personne qui n'est pas en plein accord avec les théories aristotéliennes.

Du milieu de nul part sonne le son du glas, la répercussion d'un Canon. C'est le Canon (chanoine) Copernic, homme d'Eglise et qui fasciné par les mouvements célestes, les étoiles, le mouvement de la terre remet en cause toute la théorie qui traite de la rotation ou l'immobilité de la terre. En partie faux, très confus, le *De Revolutionibus Orbium Coelestium* de Copernic fut néanmoins une des bases qui servira à Johann Kepler pour achever son oeuvre.

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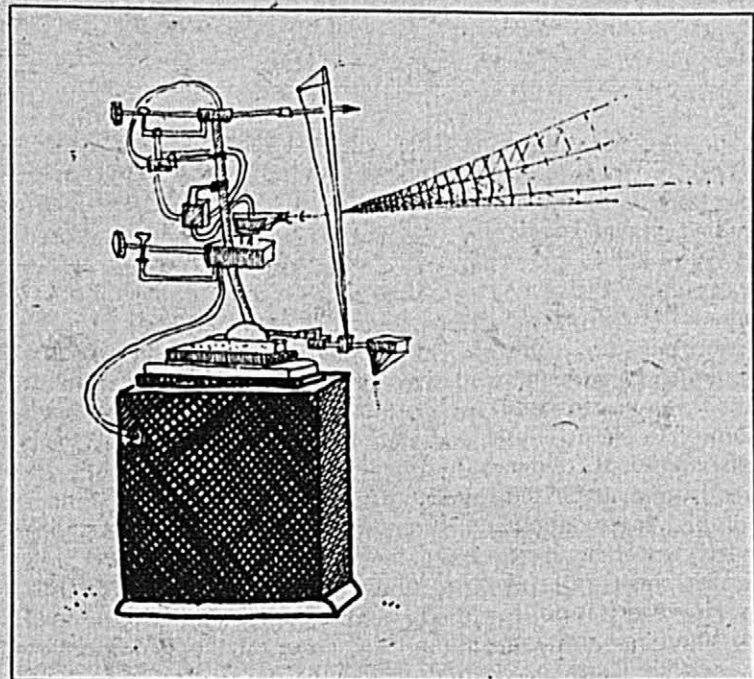
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Édition de science: science dans la société



science à des fins religieuses et une concordance entre les valeurs cosmiques émises par la théologie protestante et les valeurs cosmiques promues par les premières théories scientifiques modernes.

Le refus de l'autorité et l'individualisme empirique, communs aux premiers protestants et aux premiers savants modernes, détermina un rapport de convenance entre leur science et leur religion. La mise en avant des bonnes actions par les calvinistes, un peu plus tard, donna une bonne impulsion effective à l'activité scientifique.

D'où le déplacement des centres scientifiques après l'époque de Galilée et de Kepler, de l'Italie catholique et de l'Allemagne luthérienne, vers les régions atlantiques soumises à l'influence calviniste: l'Angleterre, la Hollande, la France avec ses huguenots et calvinistes de la foi catholique que furent les Jansénistes.

Luther et Calvin se sont élevés contre la nouvelle astronomie copernicienne à la lettre des Écritures. Mais la conception médiévale du monde se composait d'une théologie et d'une philosophie de la nature étroitement intégrées; son renversement s'accomplit de façon simultanée non concertée, d'un côté par les «Réformés» qui s'attaquèrent aux éléments théologiques, et de l'autre par les savants qui s'attaquèrent aux éléments cosmologiques. Calvinistes et savants luttèrent en fait dans des directions plus ou moins semblables et ouvrirent la voie à une nouvelle conception du monde mécanique et théologique, fondée sur l'œuvre de Newton qui connut une popularité considérable au XVIII^e siècle.

De leur côté, les premiers savants modernes étaient les artisans d'une transformation bien différente: Copernic avait rejeté la gradation des éléments matériels en assignant à la terre le mouvement circulaire,

prérogative antique de la matière céleste.

Contre l'opinion traditionnelle, Copernic concevait le soleil comme le roi du système solaire et comme le père des astres, gouvernant les planètes qui circulent autour de lui.

Avec Kepler, le rapport devient plus serré: attribuant au soleil le pouvoir physique de gouverner le système solaire, Kepler confère à cet astre la dignité et la puissance qui peuvent en faire la demeure de Dieu lui-même.

Un tel changement dans les valeurs cosmiques semble avoir exercé quelque influence sur les métaphores et les qualifications de la majesté à cette époque. Auparavant, on comparait un monarque dans son royaume au «Primum Mobile» des confins du monde: ainsi s'exprimait Roger Bacon dans son *Essay on Sedition*.

La doctrine de la pluralité des mondes, même dans sa forme la plus restreinte, a des implications qui vont à l'encontre du concept traditionnel de hiérarchie. Elle a ajouté du poids à l'idée que les corps célestes sont qualitativement de même nature que la terre. Sous sa forme la plus large, la doctrine de l'infini des mondes habités tend à assigner le même statut à tous les êtres finis. Après avoir abandonné la science pour la religion, la recherche téméraire et présomptueuse de la nature pour la contemplation silencieuse de l'infini et du néant, Blaise Pascal écrit dans ses *Pensées*: «Dans la vue de ces infinis, tous les finis sont égaux et

je ne vois pas pourquoi asseoir son imagination plutôt sur un plus que l'autre. La seule comparaison que nous faisons de nous au fini fait de la peine.»

La doctrine de la pluralité des mondes aida à concilier la théologie calviniste et les théories de la science moderne au XVII^e siècle.

Le philosophe allemand Leibniz pense aussi que notre monde est le meilleur de tous les mondes possibles et qu'il repose sur la considération du maximum et du minimum, de façon telle que le plus grand effet est pour ainsi dire obtenu aux moindres frais.

Ainsi le système solaire est une machine par elle-même douée de son propre mouvement: les espèces organiques sont fixées pour toujours dans les formes diverses où elles ont été établies initialement créées. C'est sur ce point que l'alliance établie entre la théologie protestante et la science moderne devait finalement se rompre.

La science ne semblera plus alors compatible avec la théologie protestante et l'opposition religieuse aux théories de l'évolution se manifestera avec une grande force dans les pays protestants au XIX^e siècle. Toutefois, cette alliance devait durer un siècle et demi et le système physico-théologique de Newton fut généralement admis dans tous les milieux cultivés.

Mais la science fut fortement liée au mythe, et dans un certain sens, la religion prenait l'aspect de mythe.

Par exemple, il est devenu habituel de qualifier d'évolutionnisme les théories de Lamarck et de Darwin. Il faut noter d'abord que le mot évolution n'a pas toujours eu le même sens. C'est un bel exemple de notion à manier avec précaution sous peine de tomber dans la confusion.

Au XIX^e siècle, le mot a pris la connotation que nous lui accordons actuellement, soit une transformation progressive qui amène des formes nouvelles et même imprévisibles. Mais ce n'est point le sens premier du mot. Au XVIII^e siècle il désigne le développement de quelque chose de défini à l'avance. Ce déroulement a lieu dans le temps, mais ne revêt aucun caractère d'imprévisibilité, d'improvisation, de nouveauté

effective. C'est seulement la réalisation de quelque chose qui existait en germe. Loin de revêtir un sens transformiste, l'évolution l'exclut.

On conçoit donc que Darwin ait voulu éviter d'utiliser un mot dangereux, porteur de toute une tradition qu'il rejetait. Il parlait de transmutation des espèces, de modification par sélection naturelle, de transformation. Si finalement il s'est référé à l'idée d'évolution, c'est à cause d'un philosophe anglais: Herbert Spencer. Ce dernier avait largement recouru à la notion d'évolution. Il la définissait comme l'intégration de la matière et une dissipation de mouvement, durant laquelle la matière passe d'une homogénéité naturelle et incohérente à une hétérogénéité définie et cohérente, et durant laquelle le mouvement retenu subit une transformation parallèle.

D'un point de vue idéologique, c'est là un intéressant exemple de formation d'un mythe philosophico-scientifique.

Et c'est probablement là où réside les arguments qui ont fait de Darwin un «hérétique» scientifique puisqu'il s'attaquait directement à la conviction Biblique de l'origine des hommes.

L'avancement technologique, de nos jours sert de moyen pour couper court aux litiges religieux et d'incruster plus en avant les actions dramatiques dues au fanatisme religieux. Point n'est besoin de chercher loin dans quel but on invente différents genres d'armements.

Le combat entre la religion et la science au XX^e siècle ne

revêt pas les mêmes couleurs que dans les siècles précédents. Mais la conclusion est quasi la même: il y a excès de fanatisme et déversement de sang, preuve que la religion n'est toujours pas prête à accepter le cours naturel du changement des mentalités.

Pour finir, il serait intéressant de lire quelques phrases qui proviennent du génial Einstein. Si il ne traite pas de la religion vis-à-vis de la science, du moins il traite du rôle du scientifique, et c'est comme assumer une responsabilité envers toutes les idéologies religieuses qui s'opposent à l'ascension de la science dans les âges.

«L'homme scientifique a aujourd'hui un destin tragique. Soutenu pas l'inspiration vers la clarté et l'indépendance intérieure, il a, par ses efforts presque surhumains, forgés les armes de son asservissement social, et l'anéantissement de sa personnalité.

Le temps est-il révolu où la liberté intellectuelle du savant, l'indépendance de ses recherches, pouvaient éclairer et enrichir la vie des hommes? A-t-il, dans sa recherche aveugle de la vérité scientifique, oublié sa responsabilité humaine et sa dignité?

Notre monde est menacé par une crise dont l'ampleur semble échapper à ceux qui ont le pouvoir de prendre de grandes décisions pour le bien ou pour le mal. La puissance déchaînée de l'atome a tout changé, sauf nos modes de penser, et nous glissons ainsi vers une catastrophe sans précédent. Une nouvelle façon de penser est essentielle si l'humanité veut survivre.»

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Science Edition: Science Edition: Science Edition

Ethical contexts in research

Heather Peniuk

Experimentation is the heart of science. All new ideas must be tested, as well as any product of research. Most often these investigations pose no threat to anybody save a few rats. But when new drugs or therapies are discovered, or new micro-organisms created, experimentation becomes more dangerous.

What safeguards are universities, scientists and corporations implementing to protect the public? Professional organizations in the natural, physical, social and applied sciences, as well as university administrators were asked the following questions:

- Has your academic institution or professional society ever adopted a set of principles governing what is legitimate in research?

- Has there been a discussion of this issue among the researchers of your institution or society, and if so, what conclusions have they arrived at?

Many universities and societies had not adopted very stringent rules designating what is legitimate in research. Most researchers, however, did agree that some limitations should be placed on the gathering of new scientific knowledge, and a number of researchers even outlined limitations which are currently in effect.

The Physical Well Being of Human Subjects

The most common limitations to research are safeguards designed to protect the physical well-being of human subjects. The Helsinki Declaration, adopted by the World Medical Association in 1964 as a guide to clinical research physicians, is one of these safeguards. The code doesn't include any legal sanctions and is only enforceable by the moral pressure of the medical profession. Its content can be summarized as follows:

- "Special caution" should be exercised in the use of experimental procedures or drugs that can alter the subject's personality.

- Research is legitimate only when the benefits are greater than the inherent risks according to a "careful assessment" by the physician.

- "In the treatment of a sick person, the doctor must be free to use a new therapeutic measure if in his judgement it offers hope of saving life, re-establishing health or alleviating suffering."

- In nontherapeutic clinical research, "the nature, the purpose, and the risk" must be explained to the subject.

An interesting application of the third principle is the court case of Dr. Daniel Martin of Littleton, Connecticut. Martin had a record of great success with emotionally disturbed children; his mode of therapy being to commit homosexual acts with his child patients.

"In the management of disturbed children," he wrote, "many general approaches have been used. None of these has been so successful that a further search for methods is indicated...I knew the law and knowingly violated it." According to some of the testimony the 'therapy' was successful

and Martin was given a light prison sentence of one year.

The law is in the process of closely linking therapy with experimentation, mainly on the basis that in either role, the physician carries the same professional responsibility.

In the first legal suit awarding damages to a volunteer subject in medical research, the main issue was the exact meaning of "informed consent" the physician obtained from the subject. The plaintiff, a University of Saskatchewan student, was paid to undergo tests with an experimental anesthetic. As a consequence, he was unconscious for four days, hospitalized for ten days, and suffered a permanent diminution of mental ability that forced his withdrawal from University.

The student was awarded \$22,500 in damages, the judge citing that the professional and legal duty of a physician to an experimental subject is as great as that of a physician to his patient and that the plaintiff had not been fully informed of the risk he was taking. The judge stated that "the subject of

Recently the traditional denotation of the term has been both broadened and narrowed in scope. For example, the range of those entitled to the special freedom has been extended to grade school teachers, to graduate and even undergraduate students. Professors can claim absolute immunity not only within their fields but also for speeches and acts that give their non-professional and often uninformed opinions as citizens. On the other hand, academic freedom has suffered from massive and successful attacks on higher education.

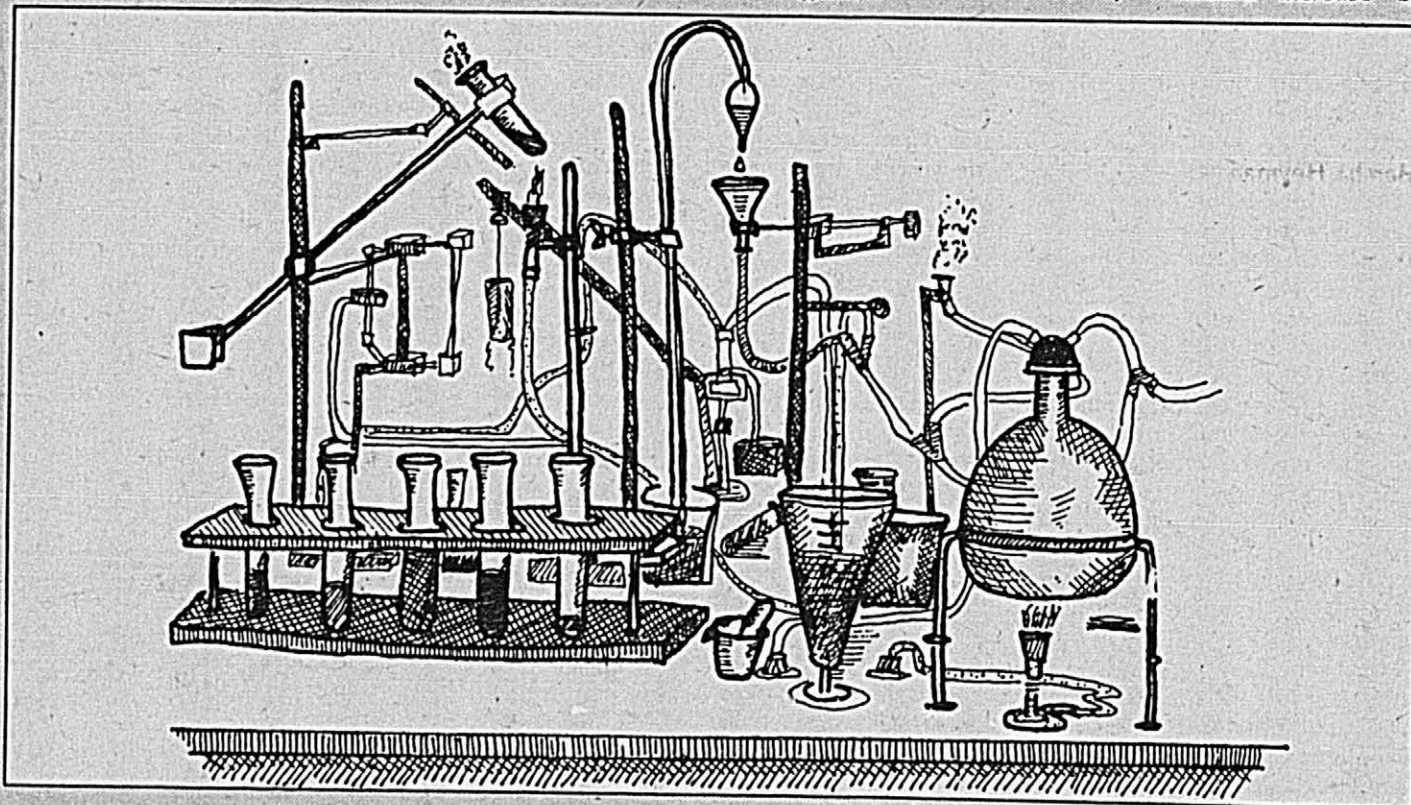
Regarding classified research, most universities and government policies bar secret contracts. However it is possible to conduct classified research on campus. Since in certain fields participation in classified research is necessary to the professional development of the scholar, selected classified research projects are acceptable for valid academic reasons. Universities such as Princeton have adopted policies such as the one mentioned, while other universities such as Stanford have barred classified research altogether.

- The "ethical implication of advances in biological science threaten the individual's command over his own life."

- "Science is not as much fun as it used to be," because it no longer provides satisfying answers to fundamental questions about the natural world.

The undeviating regularity of the Newtonian Universe gave man a psychological security which has been shattered by Einstein's 'relativity' and Heisenberg's 'uncertainty'. Recent explorations into the structure of matter led to a weapon of war with terrifying force and further strengthened this uneasiness. Wohler's synthesis of urea (the first 'man-made' organic molecule) in the 19th century challenged Christian dualism with the demonstration that the animate and inanimate were composed of the same elements.

With the manipulation of the gene, the family, the school, the church and all institutions guarding physical or cultural heredity became much less significant. Finally, the developments achieved by medicine increase by



medical experimentation is entitled to a full and frank disclosure of all facts, probabilities, and opinions which a reasonable man might be expected to consider before giving his consent.

Academic Freedom

Another important research limitation is that of academic freedom. In the traditional meaning of academic freedom, the absence of impediments to the scientists' search for knowledge and the communication of his findings was not merely a display of the civil rights guaranteed to a liberal society. The greater freedom given to a scholar were based on the belief that the advancement of learning is greater when not hampered by external restraints, and that the increase in knowledge consequently benefits society as a whole. In this perspective, the freedom given to researchers is not an absolute right, but is an institutional norm that, just as any other norm, must be carefully weighed to find a balance that gives maximum general welfare.

Certainly popular public opinion would indicate that there is a growing distrust of scientific research, both classified and published. Many articles have recently been published in *Science*, the journal of the American Association for the Advancement of Science, that question the value of scientific research altogether. According to one such article written by Robert Morisson of Cornell University, public approval of science has slackened for the following reasons:

- "The mere capacity to manipulate the world does not ensure that it will be manipulated for the net benefit of mankind."

- The increased production that science has made possible comes at the cost of rapid exhaustion of natural resources and increasing contamination.

- Even the improvement of health has kept a large number alive but in suffering.

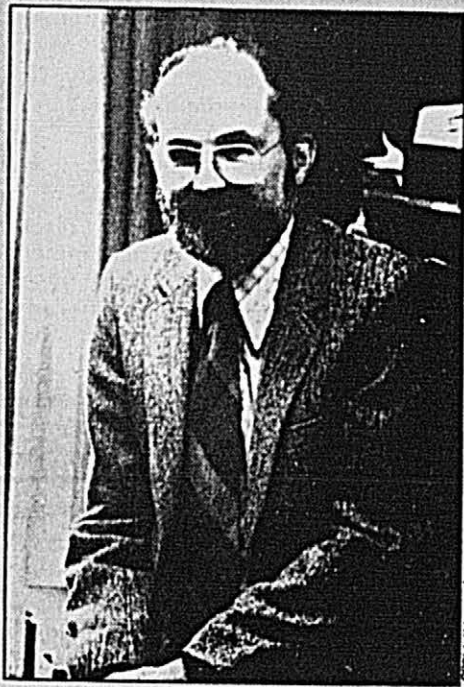
millions the number of humans who live at the edge of destruction.

Certainly no one can deny the benefits that science has given man. It is not the intent of this article to deny legitimacy to any limits of research. However, it must be pointed out that the limits presently existing have often been poorly chosen.

There is good reason to fear the future effects of nuclear and genetic research and in the name of academic freedom, professional societies and universities are calling for new restrictions on the rights of academic research.

The solution to problems can only be derived by the application of informed intelligence. If we set priorities because of new political commitments, than there are no conflicts. If, however, we allow commitment to replace knowledge, then we also allow confrontation to replace analysis, and ideology to replace science, and then no problem can be solved. □

tion: Science Edition:



Four minutes to midnight

by Marsha Heyman and Karen Slobod

Don Bates is a McGill professor and chairman of Humanities and Social Studies in the Faculty of Medicine, as well as a physician. He has been the Canadian delegate to both conferences of *International Physicians for the Prevention of Nuclear War*, as well as an active member of *Physicians for Social Responsibility*.

Daily: How is science involved with the military?

Bates: It's said that something in the order of 30 to 40 percent of scientists and engineers in the United States are in the defence industry — directly or indirectly. It's argued that one of the reasons for the failing performance of U.S. industry in competition with a country like Japan or West Germany, has been the draining off of the talent and the expertise for research and development in civilian and consumer goods in favour of military research.

Research and development in the military is just an enormously big item. It's profoundly taxing the development and the support of our industrial power in North America and in Europe.

A country like Japan that has not had a commitment to the military, has been able to make use of its scientists, its technology and its engineers in the development of its industrial base.

Daily: Do you believe that scientists should get out of military research?

Bates: I think militarism creates a very serious moral problem for scientists. There are scientist groups that reflect their concern over this problem. One of the older groups is of course, Pugwash.

Daily: What is Pugwash?

Bates: Pugwash is a little town in Nova Scotia. An industrialist by the name of Cyrus Eaton, 20 years or more ago, tried to get scientists together to talk about the perils of nuclear war and militarism. A lot of them were at the

The Pugwash movement has been rather indifferently successful because although scientists have been getting together for years and years, there's not really very much visible public attention paid to it.

In fact it was because of that, that the International Physicians (for the Prevention of Nuclear War) was formed. They felt that perhaps by doing the same thing as Pugwash but with physicians, they might capture a lot more public attention. In fact that's what happened.

Daily: Why do you think there has been a sudden rise in the number of such peace groups?

Bates: I think there has been a gradual shift in international relations. First of all there was the heightening of tensions between the United States and the Soviet Union that really began at the latter part of Carter's term of office and then was followed by the very much more aggressive, much more militaristic perception and policies of the present United States administration.

I think that in Europe which started up (interest in disarmament) before we did, the critical factor was the NATO decision of December 1979 to deploy nuclear missiles, the Cruise missile and the Pershing II, on European soil. That re-awakened the peace movement in Europe and then it gradually spread to North America. I think additionally it was stimulated by the policies and attitude of the Reagan administration.

Daily: Along with disarmament, what do you feel are the most important contemporary issues?

Bates: One obvious priority is the fate and the situation of the Third World — the developing countries. A second priority is the economic situation of the industrialised world. A third issue is disarmament. I don't however see them as being in that order.

I think that if we concentrate on disarmament we are helping the other two. An effort to wind down tensions between East and West would help, for example, in proper attention being given to the North-South dialogue.

I think that while military spending is only one factor in the present economic situation it certainly is a factor.

If we concentrate on an approach which heads us down the road towards disarmament, such as stopping the arms race — a freeze — then I think that will be contributing to solving the other two major problems the world faces.

Daily: What kind of work have scientific groups been doing for disarmament?

Bates: I think the scientists have been trying to disseminate information about the (military) technology, the weapons' systems, and the implications of these.

For example, I'm very interested in the radioactive fallout and the physics of explosions since I'm involved in talking about the medical effects of nuclear war. Scientists are in the forefront of giving us the basic information that we need for that sort of thing.

On the other hand the issue of whether or not Canada should permit the flight testing of the Cruise missile this winter over its own territory brings up technical questions of what the Cruise missile is and what the testing will be for. Scientists again are playing a role in doing that.

They are also acting as citizens, after all they're not excluded from participating in any aspect of the Peace Movement. A lot of them were at the

June 12th demonstration in New York. I don't think the scientists are doing anything different from other groups, but they do have the knowledge of the technology, the weapons and of nuclear explosions.

Daily: Do you feel satisfied with the role that scientists are playing in trying to alert the general population to the effects of a nuclear war?

Bates: I think that the scientists have been most effective in things like *The Bulletin of Atomic Scientists* and in the efforts to disseminate technological and scientific information about weapons and the physical effects of nuclear war.

I think the physicians have been, however, particularly successful in capturing the public attention about the impact of nuclear war on human beings, the environment and also on the complete impossibility of any kind of medical response to a nuclear war.

Daily: What's the most effective way of attaining disarmament?

Bates: If you get sufficient public sentiment behind the notion of disarmament then the government is going to listen. It has been said that governments listen to two ideas: how to save money and how to get votes.

If they come to believe that the public is insistent in sufficient numbers on their taking a stand for disarmament, I think you'll see a change. My own impression of the present federal government is that the leadership would take a much more conciliatory role in international affairs, a very much more visible and courageous stand in favour of disarmament if there was public pressure for them to do so.

Science in society

But at the moment all the pressure is coming from economic interests that want the federal government to follow the United States lead as closely as they can.

Daily: Do you believe a nuclear war is near at hand?

Bates: Yes, I think it is seriously close. *The Bulletin of Atomic Scientists* has a doomsday clock on it and it had seven minutes to midnight for a long time. It has recently been moved to four minutes to midnight.

The likelihood of some kind of nuclear explosion, a bomb, an aggressive act occurring before the end of the century is extremely high. The likelihood of that leading to an all-out nuclear war is not as high but is certainly a possibility.

I think that if we pursue the present course of international relations between the two superpowers, it's going to lead us into war. Under the banner of nuclear deterrence we're actually preparing for nuclear war. □

A social science

continued from 1

Another example of this illiteracy is in the definition of life. The United States Congress is currently being asked to define life, using scientific evidence, in such a way as to outlaw abortions. There is no scientific evidence that could be of any use in this discussion since the question is not a scientific issue. Science cannot be asked to define such an arbitrary idea as life. In addition no one definition could possibly include all the nuances of life, without including many extraneous forms.

There has been no push by the politicians, nor any evidence of any thought being given to developing some kind of scientific policy. The political community ignores much of what the scientists have been saying until it is too late.

One of Canada's most important problems, acid rain, could have been prevented if politicians had the foresight to consult the scientific community and not be afraid to implement safeguards to protect our lakes, rivers, plants and animals. If serious efforts are now made to stop acid rain, it might not be too late to save our environment.

Our biggest problem concerning acid rain seems to be the American government, which seems content to destroy our environment in order to save several powerful companies some money.

Acid rain is not the only example of short time gain traded for future disaster. The ignorance concerning nuclear energy is staggering. The safeguards being used are not sufficient to protect our lives.

Love Canal and its offsprings ensure long and costly, both in monetary and human terms, clean-up operations well into the future.

Perhaps the only example of control of science came from the scientists themselves. In research involving genetic engineering, the scientific community has outlawed certain types of experimentation until they can find a way to safely isolate dangerous 'bugs'. This and the increased involvement in groups such as Pugwash and Physicians for Social Responsibility, indicate that the scientific and health communities are realising that they can play a key role in the directions science is taking.

No real science policy can be developed until the general population becomes informed on scientific matters. Such a discussion should not be limited to what science is, but should include where science has taken us and where it can go.

Richard Gold

Science Edition: Science in society

Herpes

Disease with no cure

by Moira Ambrose

Although science has affected all aspects of our lives, perhaps its greatest contribution to society has been in the health field.

Through science we have been able to determine how diseases affect us, even though we don't always find a cure. With this knowledge, we are able to curb their affects. A case in point is herpes.

Genital herpes is a sexually transmitted and incurable viral infection. It has been considered the VD of the middle class and elite, but is widespread among all young people regardless of socioeconomic status or race.

An estimated 20 million people already have herpes and its number has been increasing in North America since the mid-1960's. The disease has been documented since Ancient times when it occurred among Greeks and Romans. Each year there are about 500,000 new cases.

Herpes viruses cause many diseases including chicken pox, shingles and mononucleosis. Herpes simplex virus (HSV Type I), causes labial herpes, or cold sores on the mouth. The closely related HSV Type II causes most cases of genital herpes. However, there is an increased incidence of genital herpes caused by Type I as a result of oral sex.

Genital herpes usually appears two to ten days after direct contact with an infected partner. Fluid-filled sores appear on or around the genital organs, sometimes on the buttocks or thighs, or inside the urethra, vagina or cervix.

Proper diagnosis is mandatory because these sores could be an indication of another infection. As soon as any such lesions appear, have them diagnosed by trained medical personnel.

During the primary outbreak, there may be fever, swollen glands or achiness. The first attack is often painful, but subsequent incidences are milder and do not last as long. Type I recurs less commonly in the genital area than Type II.

After the sores heal, the virus retreats to the nerve endings near the base of the spine, lying dormant until the next attack. Some factors that may trigger recurrences are emotional and physical stress, poor nutrition, menstruation or friction from tight clothing.

People who have had one bout of herpes often open themselves to another by letting themselves become distressed or worried over their sexual activity or lack of. Psychological factors that often trigger herpes recurrences are common and very real. If someone is nervous

about admitting to being a carrier of the disease, he or she may aggravate its dormancy by getting themselves upset.

The severity and duration of recurrences vary with each case. Some people may have an initial attack and never be bothered again. Others have a recurrence once every few years, while still others have a regular pattern of frequent attacks.

Most patients with recurrent herpes experience itching, burning or tingling, known as prodrome, at the site of the original infection before the new lesions begin to form. To avoid spreading the infection, it is necessary to avoid all intimate contact during the active infectious stage, from the start of prodromal symptoms until the blisters are completely healed, not just scabbed over. Wearing pajamas can prevent accidental contact in bed.

Recent reports from the University of California at Los Angeles confirm that herpes can be spread through clothing, towels and toilet seats. Likewise, herpes contagion cannot be prevented by using condoms and spermicides.

Pregnant women should be especially careful if they have herpes in their medical history. If a woman has an active herpes infection at the time of delivery, her infant has a significant risk of being infected if delivered vaginally. A high percentage of these babies will either die or have brain damage.

Such difficulties can only be prevented if women warn their doctors that they have had herpes. If there is evidence of active virus infection at the time of delivery, a Caesarean section can be preformed. Carefully washing hands and towels can protect the infant from infection after birth.

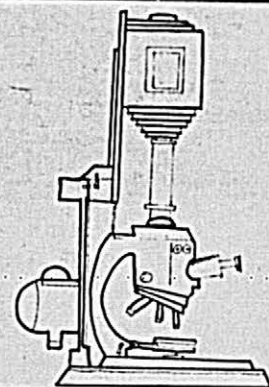
There has been some indication that women with herpes have an increased risk of getting cervical cancer.

"Most viral diseases are mild, but with any long-term disease

there can be long-term consequences," says Dr. Fred Rapp, chairman of the department of microbiology at the Pennsylvania State University College of Medicine. "Having a Pap test as often as your doctor suggests can help reduce and almost eliminate the risk of invasive cervical cancer."

Many doctors recommend that women who have herpes have the test at least twice a year.

Dozens of treatments have been promoted for herpes, including dietary supplements such as L-lysine and applying



ether to sores. In March 1982, the first effective drug was approved by the Food and Drug Administration. Acyclovir, available by prescription as Zovirax, is an ointment that reduces virus growth, shortens the healing time for sores and sometimes reduces pain in patients with initial infections. But it is not a cure. It neither prevents nor alleviates recurrent bouts.

Within the last two weeks, a new drug has appeared on the Canadian market. The drug, promoted by Dr. Portnoy of the Jewish General Hospital in Montréal, is still in its early stages of public use.

Flo Tracy, Warden for McGill Residences, said that the occurrence of herpes at McGill was no greater than at other universities in Canada.

"We have a few cases here and we have literature in the Student Health Services for anyone who wants more information," she said.

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Science Edition: Science in society

Science Incorporated

by Ivan Slobod

Science is as nebulous as the concept of fruit. You know what it is but you can't touch it. And like all concepts, you can sell science. The question is at what price? Are the institutions which train scientists responsible also for insuring that certain minimum ethical standards are maintained?

One of the first things engineering students are taught, as are their confrères in commerce studies, is that the profit motive is what makes this society tick. Capitalism creates markets where none were before and transforms most things into commodities, especially those which are scarcest. Students in science programs, with an emphasis on technology, are led by the nose toward the god of the free enterprise system. Ours is the most advanced society ever developed, with the greatest opportunity for personal gain.

This does not come without its costs. For many these costs are first personal, then more widespread. Ultimately they touch us all. Academia, science and scientists cannot remain unspoiled, despite the myth of the ivory tower.

Science is a business, and in the right hands a very profitable one. In the course of one university year, Monsanto Company and Harvard University's School of Public Health were able to conclude a \$23 million research deal.

The money, quite properly, was used to fund projects and seed ideas that the university administration, faculty, and students had. The fun began when priorities were set as to which projects and ideas would receive financial assistance. Setting priorities is one of the trickiest things a university must do. It is committing itself and everything it stands for to certain goals, and by necessity these aims will lock-in funding for a certain period of time. Therefore dismissing an idea or program must be done with the long view in mind.

In the United States, where private institutions depend on important chunks of funding from non-governmental

sources, private donations become a bloodline — the difference between continued financial solvency and academic bankruptcy.

A university's relationship with corporate sponsors begins with 'straight' donations of surplus equipment, followed by permission for university researchers to use company labs and finally direct funding. In 1980 Control Data Corporation and Purdue University signed a three year, \$3 million research agreement. Along with other gifts this donation increased the corporate-funded share of Purdue's budget from five percent to 12 percent.

That is not always enough. Estimates vary but most experts agree that facilities in some university labs are 30 years out of date and becoming more obsolete every year. In 1977 one U.S. Engineering Council estimated it would cost \$200 million a year just to maintain the level of research equipment.

Although that figure has never been met, industry-university funding has increased, because of a lack of research facilities. The benefits for the university are obvious. Those for industry are not quite so clear.

Some industrialists are concerned with what they see as lagging innovation and productivity, combined with competition from foreign manufacturers. The solution was outlined quite candidly by the vice-president and director of research and development of Dow Chemical Company. Dow was the manufacturer of napalm, used against Vietnamese civilians by U.S. forces in Vietnam. Malcom E. Pruitt: "I think everybody can see our (business-university) common

goals and mutual interests. The universities need jobs for their students and we need what they come up with." The issue of busy work for university students is debateable, but the need for funding and additionally for the results of that funding are obvious.

The advantage of voluntary, as opposed to compulsory contributions, by corporations to universities is equally obvious. Money can be used as a lever. With gentle persuasion a corporate donor can achieve its desired ends and if all else fails funding can be withdrawn. The uncertainty helps keep administrators on their toes. Contributions are tax deductible. The Council for Financial Aid to Education estimated that the business share of all educational support reached a new high in 1978-1979.

One graphic indication of the effects of corporate donations is the dramatic decrease in the number of doctoral degrees granted in engineering. From 1969-79 the number decreased from 3,400 to 2,800. The Dean of Engineering at the Texas College of Engineering expressed it this way, "Companies offer twice the salary to a PhD that I can pay (to a professor), we can't compete."

Business, whatever other pleasures it offers is crass. It is straightforward if not simple. The profit motive guides decisions. Therefore all decisions must be understood within that context. If a university receives a grant from a corporation the corporation receives, or expects to receive, something in return. That something obviously must be valuable enough for the corporation to continue issuing cheques in the name of the institution.

With recent government cut-

backs in education funding, implemented by the Reagan administration in the United States, the situation is even more difficult. Schools are scrambling more for less available money. They have upped tuition rates, increased fund drives and finally, sought more corporate donations. With the schools begging for mercy, the corporations end up the winners.

And like candidates who accept large corporate donations, the universities become kept. Perhaps some less than others, but all tainted nonetheless. In an effort to defuse the situation, many administrators suggest the problem really isn't a problem.

They argue quite passionately in favour of increased corporate donations, from as wide a spectrum of gift givers as possible. They feel that this diversity will somehow grant them immunity.

In 1978 the Business-Higher Education Forum was created by J.W. Peltason of the American Council on Education. In a recent article he is quoted as saying, "the best thing is for higher education not to have to depend on any single source for money. Higher education gets funds from so many different sources that no one source can control it. That's why it retains real independence." (emphasis added).

This feeling is not shared



uniformly in the educational community. David F. Noble, a science historian at MIT had this to say about the above-mentioned Monsanto-Harvard deal as well as a smaller scale (eight million dollar) gift from Exxon corporation to MIT.

"Exxon's gift to MIT is pennies in the MIT budget, but it involves influence," he said. "There's a finite number of scientists and engineers. Say there are 1,000 toxicologists and Monsanto 'buys' 900 of them through gifts to the university. That means there's only 100 left. These companies are not going to get an immediate return on their investments, but they are going to influence the shape of things to come. They're going to get a handle to control future markets," Noble added.

James Funk, Associate Vice
Please turn to page 12

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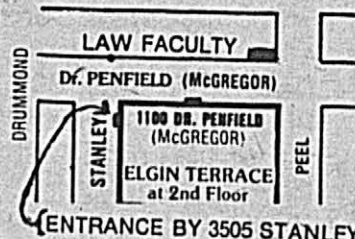
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Science Edition: Science in society

Investing in a university education

continued from 11

President for Academic Affairs at the University of Kentucky, told one journalist, "I don't really believe that business and industry want to 'buy' us... we have no major concerns." Well some people think they do. David Noble believes the administration-corporation chumminess is no accident. He says administrators think like corporate executives in terms of what role universities and scientists should play. In 1980 the Staff director of the Business-Higher Education Forum, Thomas Stauffer discussed this issue, "It's not

like apples and oranges, but more like tangerines and oranges."

Many industrial researchers teach part-time at universities and professors often consult for industry. That overlap raises another issue, not directly related to money.

One of the immediate possible problems with corporate donations is the subtle, and sometimes not so subtle, re-direction of research toward areas the corporation has expressed interest in. A corporate sponsor may want the university to work on projects that will provide results (read profits) in the short term. Malcolm Pruitt

of Dow Chemical, "universities that cooperate with Dow will have to understand Dow's needs."

The issues of patents, trade secrets and publication privileges also intrude.

A university atmosphere reputedly is one where students pursue free and unfettered thought. To work in a university environment is to challenge the mind and tease the brain, to elucidate and illuminate. Capitalism is based on the profit motive, ostensibly academia is not.

Therein lies the essential contradiction future scientists must deal with. If corporate donors

through their power and wealth can break the universal-ness of university then the quality and value of the degree will suffer. In the long run our society is the loser. Secrecy's only usefulness is in generating profits. Once things, be they goods, services or information, are no longer scarce, they are no longer easily exploitable.

Seen from another perspective corporate donations still do not appear worth it. The consumer of whatever the company's research ends up producing will pay less if there are more manufacturers ready to provide it. If a major company can lock up most scientists,

then consumer sovereignty, as well as academic freedom go out the window.

In 1980 the president of the Association of American Universities, Thomas A. Bartlett, no closet radical, expressed his concern this way, "The financial squeeze on universities might make corporate support desirable despite the risks." He added, "there could be a lot of problems."

"However, the alternative might be to accept a future of mediocrity. It might be the risk the universities have to take to ensure a financially secure future," he concluded. □

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Biology: talking in the halls

continued from 5

precious science. In collaboration with Scandinavian experts working on the problem for the last quarter century, the federal department of fisheries and ocean, the McGill's Arctic Biological Station, and the native Makavik Corporation, Curtis uses trap nets to monitor and tag the char rather than gill nets which kill a large number of fish.

Currently working on three lakes only a few hectares in size, Curtis hires two compe-

tent undergrad field assistants each summer.

"You have to be rather adventurous, with a keen interest in the research and ability to withstand the isolation of mosquito-infested field camps."

The reward?
"What we do will ultimately be of some help."

The limitations?
"My money is gobbled up just getting people up to the field camp; sending equipment north means thousands of dollars." Compare this to the biologist who walks across the hall to his lab.

Biology

In a setting like the Stewart Biology Building, a modern teaching and research facility constructed to compliment integrated research, hallway interaction is vitally significant.

"The interaction in groups has crystallised nicely and produced direct spin-offs for graduate students," said Chairman W.C. Leggett.

Referring to four axes of research concentration: Ecology, Human Genetics, Neurobiology and Cell Molecular and Developmental Biology, Leggett cites an impressive foliage of research projects branching from each core

trunk.

Among the ecologists, the Limnology Research Group, one of four Québec government funded Centres at McGill, a team of 24 researchers (21 of whom are graduate students) attempts to understand the fundamental processes of production in fresh water systems. Studies include the assessment of regulation factors controlling phosphorous concentrations in lakes and this group provides technical advice for several lake services such as Lake Memphremagog Conservation Incorporated.

The most recent addition, a Genetic Manipulation Research Group formed in 1981, works on a program of studies designed to improve agricultural production using the tools of genetic engineering.

"These long-term fundamental research programs are frequently difficult to conduct in an industrial or governmental lab because of the pressure to meet shorter term applied objectives," said Leggett.

However, biological research at McGill is no less ardent because it is conducted in academia. Leggett said, "In competitive research funding with other universities McGill ranks very high. But this doesn't

make us complacent. On the contrary, we aggressively searched for good people and they have consistently performed at a high level."

Chemistry

Performing at a high level across campus, organic chemist Dr. K.K. Ogilvie is on the verge of a major breakthrough. Ogilvie has discovered a novel class of compounds of the nucleoside type which are extremely active against herpes virus simples 1 and 2 in animals. The drug, presently being tested clinically on humans, will take four or five years before it is official. But Chairman M. Onyszchuk maintains "there is every good reason to believe this will be as effective to humans as animals".

In the forefront of his field, Ogilvie has also synthesized nucleotides which culminated in the assembly of the Gene Machine. Commercially available through Bio Logicals Inc., the machine is capable of rapidly and automatically linking together chains of more than 20 nucleotides into gene segments such as those found in DNA and RNA.

"Pure or free research often leads to major innovative discoveries," said Onyszchuk. "Even though the goal of chemical research at university is fundamental we must strongly justify our existence here by showing the impact of our work on daily life and industry." □



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Date: Thursday, 30 September

Place: Chancellor Day Hall, Moot Court

Time: 1:00 p.m.

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NewsNewsNewsNewsNewsNewsNewsNewsNewsNew

Community McGill symposium attracts volunteers willing to help

by Suzy Goldenberg

Apart from giving blood, McGill students had another way to show they cared this week.

Yesterday's Community McGill September Symposium was designed to hook up students at McGill with different volunteer organizations.

Representatives from 12 groups that send volunteers to hospitals, work with children, the elderly, mentally and physically handicapped people, and prisoners, were available to explain their functions.

According to Ellen Murphy, president of Community McGill, the symposium was valuable because: "It enables

students to get job experience without making a life-time commitment" to any profession. 117 students volunteered for work with the various organizations.

Lise Rhéaume, coordinator of l'Association de rencontres culturelles avec des détenus (ARCAD), was also pleased with student response to the exhibits.

"There was always someone at the table, always someone interested," she said.

ARCAD promotes bilingual, free-ranging discussion groups, and cinema clubs in all federal and provincial penitentiaries in the Montréal area.

Another group, Citizen Advocacy, establishes one-to-one contacts between volunteers and mentally or physically handicapped people. According to Diana Regimbau, coordinator of the English sector, empathy is the prerequisite for volunteer work, not experience.

Perhaps one of the largest groups represented at the Symposium was the Women's Information and Referral Centre. Its current bank of 55 volunteers staff a newsletter, resource centre and answer phones.

Closer to home, Community McGill is also in search of volunteers to staff its office on campus.



Moslems march in protest

by Abbas Mohaghegh

2,000 Moslems marched to protest the massacres of Sabra and Chatilla in Montréal yesterday.

The Moslem community of Montréal held a congregation of prayer at 9 a.m. to celebrate the Moslem feast of sacrifice. This feast marks the end of the pilgrimage ritual to Mecca.

The prayer took place at Park Sauvé arena and afterwards worshipers marched to express their strong support for the Palestinian cause.

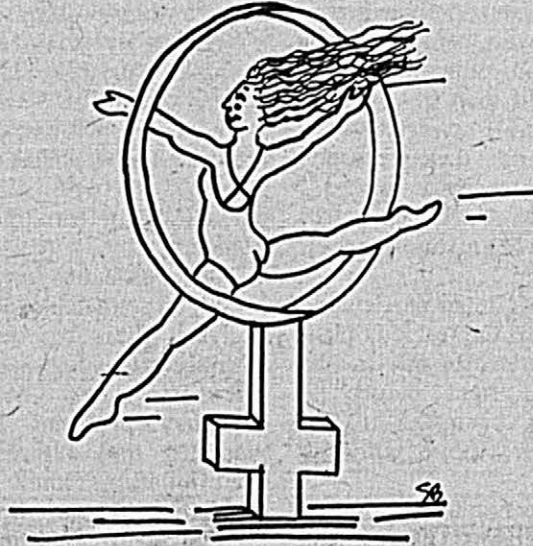
The main speaker was Ahmad Shaik, secretary of the Islamic centre of Québec. He denounced the Israeli invasions in Lebanon and demanded the Canadian government take the following steps:

- Recognition of the P.L.O. as the representative of Palestinian people and their right to self-determination;
- The release of all prisoners taken by Israel.
- Immediate and complete withdrawal of Israeli troops from Lebanon.

These demands were embodied in a petition that some members of the Moslem community signed and sent to Prime Minister Trudeau.

Le Daily Français tiendra une réunion mercredi 29 septembre à 16:15 dans l'ancienne salle de séjour ou le nouveau Gerts II.

A l'agenda: Des excuses pour ceux dont les articles ne sont pas parus, la discussion du prochain Daily, et le blabla habituel.



Women stymied by feds

MONTREAL (CUP) - Women's struggle for equal pay for work of equal value is being stymied by the federal government's wage and price controls according to one of Canada's leading feminists.

Doris Anderson, president of the national Action Committee on the Status of Women recently told students at Concordia University that women will now have little opportunity to gain financial equality with men.

Women remain clustered at the bottom of pay scales and with the freeze on collective bargaining, there will be few opportunities for them to improve their position, she said.

Despite the current economic

situation, women have made gains in the fight for equal pay although "it will take a lot more work," she said.

Women's sparse political representation is a major concern for Anderson, who added that only five per cent of Canada's Members of Parliament are women.

"We must make our vote heard in society, and the results will be seen at the ballot boxes."

NAC, a federal lobby group, is a coalition of 212 member groups representing more than two million women. It monitors federal government policies for injustices against women.

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US to use drug bombs

(RNR/CUP)— The next war may feature a new kind of 'acid rain': the American Army is stockpiling thousands of bomblets containing a mind-altering chemical far more powerful than LSD.

According to recently declassified Pentagon documents, the chemical, known as "BZ," induces three-day-long "trips" in the minds of anyone exposed to it. *Mother Jones* magazine reports that field tests on BZ were conducted in Hawaii during the Vietnam war, and there are unconfirmed reports from the North Vietnamese that the chemical was used against insurgent forces.

Several of the Pentagon

documents detail an Army exercise in Utah in 1964, code named "Project Dork." Thousands of soldiers reportedly became disoriented during Project Dork as they tried to carry out war games after being exposed to clouds of the super-hallucinogen.

Mother Jones also says there are reliable reports that BZ was to be used by U.S. forces during the aborted rescue attempt of the American hostages in Iran.

One Air Force paratrooper recalls that another trooper freaked out after breathing some BZ mist. Says the trooper of his friend, "The last time I saw him, he was taking a shower in his uniform and smoking a cigar."

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McGill Investment Association
Meeting at 5:00 p.m. in Union, room 425/26. Special film presentation, as well as short intro to stock market, will be featured.

Amnesty International

First general meeting at 3:00 p.m. in Union, room 425. Office hours: Mon. & Wed.: 11:15-1:30, Tue. & Thurs.: 12:00-3:00. Phone: 392-8911.

Students' Council Meeting

Proposed and alternate terms of reference for the operation of McGill's South Africa and El Salvador committees will be discussed and voted upon. All McGill students, professors, and staff who endorse the alternate terms of reference put forth by the two committees are asked to attend and show their support. 6:00 p.m., room L234.

McGill Films Society

is showing *The Blue Angel* starring

Marlene Dietrich, starting at 8:00 p.m. in L132. Admission is \$1.50. All welcome. General meeting at 6:00 p.m. in Union, room B01. Old and new members welcome.

NDP McGill

First meeting at 4:00 p.m. in Union, room 425. All new members and anyone else interested are welcome.

Alpha Gamme Delta

invite you for Tea between 3:00 and 5:00. Make new friends and learn more about fraternity life. All women invited. 3547 University St., No. 11.

Philosophy Student Association

First meeting at 12:00 p.m. in the Philosophy Lounge, Bronfman, room 559. All welcome, especially new students.

McGill Ski Team

Dryland training at 16h45 in the wrestling room of Sir Arthur Currie Gym. See you then.

Kappa Alpha Theta Sorority

invites you to our "Monte Carlos Night" for fine food and live entertainment, from 7:00 to 9:00 p.m. at 3505 Peel St.

NewsNewsNewsNewsNews

Tenants' groups ...

continued from 3

civilization have tried in the past to censure some theatre productions," said Petit.

"It's an ancient law that dates from 100 years ago," said Petit, whose association got \$20,000 from Centraide last year. "I think that since, in Centraide's books, we are a priority, we should continue to get financing."

He pointed out that while aid to tenants' associations accounts for only two per cent of Centraide's approximately \$16 million budget, it amounts to between 70 and 80 per cent of the associations' incomes.

Bourgeois said Centraide is providing legal aid for the associations to help them rewrite their outdated charters, thus enabling them to get the coveted registration numbers.

"The government has come out with an ultimatum," she said. "But if their (the tenants' associations') charters are changed and they re-apply, hopefully they can be funded."

Centraide currently gives \$250,000 to the associations collectively.

Petit said he is particularly irate because Centraide is planning to cut off aid to the associations right before its fund-raising campaign in October, which it hopes will raise \$16 million.

Centraide has also proposed that the tenants' associations change their names, but Petit is afraid this will cause problems

with identification and provincial funding.

Petit said some people in Centraide want funding cut for tenants' associations, but that overall people in Centraide support renters' groups because they favor community organization and groups addressing important social problems. He said the government may be trying to disband tenants' groups

who oppose big land developers.

Petit said the associations protect renters against demolition, fires, reparation delays, costly renovation, and expulsion. He said their fight is getting more intense all the time because landlords are making computerized blacklists of disruptive tenants, to whom they will refuse to rent.

Enrolment increases...

continued from 3

"The labour market is such that many students may be here rather than looking for jobs," he said.

Orvig does not believe that the rise in enrollment will cause overcrowding problems.

"At first we had to adjust but I think everything is settled down," he said.

The Dean of Arts, Michael Maxwell, had a similar perspective on the unemployment/enrollment relationship.

"It's much better for students if they are unemployed to be studying than to be doing nothing," he said.

Referring to McGill's budgetary problems Maxwell suggested that future enrollment inflations could lead to problems in the Arts faculty.

"The main problem is that you cannot go on cutting down funding while increasing enroll-

ment," he said.

Arts has been facing problems with overcrowding in some classes.

"The pressure occurs in the introductory courses," he said. "We're doing what we can to provide more teaching assistants but we have very little extra money."

Maxwell was pleased with his faculty's enrollment situation.

"It shows that we are attracting students," he said. "I think it's a very good sign. I think students are voting with their feet."

Despite the cross-country rise in University enrollment this year the federal and provincial governments continue to cut-back post-secondary education funding.

"The problem is that the government doesn't feel that there is political advantage in helping students do what they want to do," Maxwell said.

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(Advance polls to be held Tuesday, October 26, 1982)

NOMINATIONS ARE HEREBY CALLED FOR THE POSITIONS OF:
Undergraduate Representative to the Board of Governors

Arts Senator (2)

Science Senator (1)

Candidates must be members of the McGill Students' Society and must be registered at McGill University as full-time students in good standing following the normal load of courses per year. Nominations must be signed by at least 75 members of the McGill Students' Society together with their year and faculty.

N.B. Students in Continuing Education are NOT members of the Students' Society.

Official nomination forms are available at the Students' Society General Office, Room 105, 3480 McTavish Street. All nomination forms must have the candidate's address and telephone number. A pen sketch of 100 words or less and a photo of the nominee must be handed in with the nomination.

Candidates may run for one position in each of the three categories provided that separate nomination papers are handed in for each position.

All nominations must be submitted to the Students' Society General Office no later than 4:30 p.m., Thursday, October 7, 1982, to the attention of Leslie Copeland, Operations' Secretary.

Marcy Vigoda
Chief Returning Officer

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SportsSportsSportsSportsSportsSportsSportsSports

Women's hockey slams Queens 5-1

by Peter Deutsch

This past weekend the McGill Martlet Women's Field Hockey team won the Queen's Invitational Tournament, defeating the Northern Lights Team in the finals 5-1.

It appears, however, that it was the Ottawa Field Hockey Team that gave the Martlets their toughest battle. This semi-final game ended in a 0-0 tie and was resolved by the Penalty Stroke (field hockey's version of the soccer shootout). Each team had 5 penalty shots on the opposing goal and McGill managed to take it by scoring thrice, once more than the competition.

These five wins pushed the Martlets exhibition record to 9-0. In the process McGill has out-scored the opposition 32 goals to two.

The Martlets may be McGill's most successful varsity team this year. The coach, Jan Meyers, is the first to admit, however, that the impressive statistics are a bit

misleading. The team has played all its exhibition games this year against teams not up to the OWIAA league playing level.

Still what she has seen so far has impressed her enough to predict that the team will finish first or second in the league (either would get them into the CIAU national championships).

"The difference this year is that there is more goal scoring for more players," she said.

She said the players have improved because they have seasoned over the summer as many play in various summer leagues. Apparently, the six rookies, nine veterans combination is a winning one.

There remains one more exhibition game, against the Dynamos at 8:15 Thursday night at Molson stadium. However the real tests will be this weekend at Guelph University when the regular season starts.



NFL skedded for McGill Nov. 8

One consolation for those feeling deprived of entertainment by the football strike in the U.S.: seeing some of one's favorite players in the flesh.

Yep, that's right, the astroturf of Molson Stadium will star on American television this November when the National Football League Players'

Association brings its all-star series to McGill.

The American Football Conference East will take on the American Football Conference Central at McGill November 8, at 9:00 p.m.

The players' association is organizing the all-star series as partial replacement for the

regular season, cancelled because of their strike against the League. The players are demanding, among other things, higher returns on television royalties and higher base pay for rookie players.

McGill is the only school in Canada the all-star series will come to.

— Peter F. Kuilenbrouwer

Classified

Ads may be placed through the Daily Ad office, Room B17, Student Union Building, 9 a.m. to 5 p.m. McGill students: \$2.00 per day.

341 - APTS., ROOMS, HOUSING

Available Oct. 1st One bedroom apartment. 528 Prince Arthur, \$155 a month. Call Jeannette at 845-7900 before 8:00 p.m.

Student looking for part-time roommate. Ideal for student commuting from outside of city. Own room, reasonable rent. Call 284-9366.

A very spacious, bright and cozy 4-1/2 apartment to share on Dr. Penfield and Drummond. 1230, Dr. Penfield, Apt. No. 606. Tel.: 286-0759 after 7 p.m.

Large two bedroom apt. to share. \$210 includes everything. 15 minute walk to campus. Also close to bus and metro. Call Nancy at 937-5408.

To share - large 4-1/2, very clean, 5 min. to McGill Univ. Furnished - Quiet, mature, responsible female student wanted. Preferably a graduate student. Rent negotiable. Call 286-1016 or collect (613) 236-1823.

Quiet nonsmoker to share floor-through apartment in older building on St. Famille between Milton and Prince Arthur. \$170 all-inclusive. 843-8642 eves.

Share 5-1/2 near gym. Prefer nonsmoking female grad student but flexible. \$200 each all inclusive. Spacious and beautiful. 392-5425 (days). 844-0589 (a.m., p.m., weekends).

Graduate student, easy going, congenial, and housebroken. Urgently needs an apt. near McGill to share or sublet. Call Glenn 936-3930.

Apt To Share with another female graduate student. Spacious 4-1/2 near Montreal General, 5 minutes

from McGill. \$190/month. Call 932-8509 from 8:30-10:00 pm.

Two Minutes from McGill, large 5-1/2 apt to share. Wanting female, French or English. \$252/month each. Call Nancy @ 845-9768.

343 - MOVERS

The Ghetto Mover. Need something moved? Closed truck, cheaper than trailer rental and NO HASSLE. Call Gary 744-6837.

Moving done quickly and cheaply by student with large van. Call Stéphane, 845-1991.

352 - HELP WANTED

Help needed with Level One French. 2 or more hours per week on Monday & Wednesdays. Call 683-7881 after 7 p.m.

Help Wanted - Students willing to work part time to earn full time salaries. Established national firm. Open hours. Call between 9 a.m. - 1 p.m. 483-2301.

Student to help care for household and handicapped 12 yr. old girl during afternoon and early evening (hours flexible). Live in or out. Call 488-1861 after 4 p.m.

354 - TYPING SERVICES

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356 - SERVICES OFFERED

Increase your assimilation potential and develop your psychic faculties. Self-hypnosis workshops. Private or group sessions. P.H. Milot N.D. 989-1920.

361 - ARTICLES FOR SALE

1) 8 AMPEX FM 1/2" reel to reel tapes No. 797-27GJ11 only used once. Originally \$90.00, we will sell for \$50.00/tape. 2) Grass Instruments EMG high performance AC pre-amplifier model 7P5 11 J. We will sell for \$550.00. For more information, please call Manon 842-1232 loc. 211.

For Sale Two large single box springs. Good condition. Best offer. Call Brian 932-7927 evenings.

Woman's Frye Boots, \$75 firm. Rust brown, over-the-knee style. Size 8-1/2. Hardly worn. 522-7997.

Single brass day bed, i.e. 3 sides, for sale. Asking \$400. Serious only need respond. 937-4877.

TICKET. You can go to Salt Lake, Seattle or Alaska for only \$150.00. BY AIR. Will discount for a pair of speed skates. Call 989-5106.

Sofa/Hide-a-Bed for sale. Bed is queen size and in good condition. \$200.00. Call evenings 488-2404 or 769-1879.

363 - TO GIVE AWAY

Four Beautiful Kittens to give away. Will deliver. Call 683-7881 after 7 p.m.

370 - RIDES

Cherche occasion pour Québec aux deux semaines. Aller, vendredi 4-5h00; retour dimanche. Téléphone le soir: 524-4884 Monique.

372 - LOST & FOUND

Lost Blue Phone Directory, around

the campus. Please return to Philippe St. Onge. Reward. 655-5498 or after 10 p.m. 655-6248.

Found: Esther Mayer your purse has been found. Please contact Alnoor Heman at 620-3291.

Lost: Fresh-water pearl bracelet with gold beads, lost on Wednesday, Sept 22nd. Great sentimental value - Reward offered if found. Please call Marclé 744-2261. Thanks.

374 - PERSONAL

To American girl who was at Athletics Registration last Wednesday inquiring about two horses at equestrian desk: I am looking for horse to ride. 683-9679.

Goalpost Incident. I meant no harm. I sincerely hope I did not cause any.

Professional Woman, mid-thirties, who seeks to meet presentable gentleman, please write to college professor. Box 698, Coteau du Lac, Que. J0P 1B0

383 - LESSONS OFFERED

Guitar Lessons Jazz, Folk, Classical. All ages, all levels. Ross MacIver. 843-3240.

Male or female student for private conversational English lessons. English mother tongue preferable. 253-8816.

385 - NOTICES

Amateur entertainment sought for downtown Restaurant-Bar. Cash prize to best performance. If interested in participating call 274-9417. 1-5 pm, 933-7985.

International Students' Association. Drop in anytime; meet other interesting people; see what's going on for international students; relax. UNION B15.

Kappa Kappa Gamma invites all women to attend: Today 9/28 (6:00-8:00) Western Dinner. We're

looking forward to meeting you! 3514 Hutchison.

Redmen Football Pep Bus to Bishop's Saturday Oct. 2. \$6.50 Tickets must be purchased by Thurs., Sept. 30, 5 p.m. from Office G3 Currie Gym.

The Dance Music by Supreme Sound D.J.'s. Sat., Oct. 2, 8 p.m. Holiday Inn, 420 Sherbrooke W. (corner Durocher), Reunion Halls D & E, snacks & door prizes, semiformal, admission \$4.00

Zete Pel, originators of the Amazing Beach Party are giving a baseball, BBQ, Beer event 8:00 Friday, Oct. 1. 3483 Peel, behind Gert's. Info: 281-9344.

Women's Studies at McGill. Combine your major with a 24 credit minor in women's studies. Come get a brochure from Professor Prue Rains, 732 Leacock.

Women 20-35 needed for study of female sexuality. Must be married, co-habiting, or celibate. Leave name, phone for Susan at 879-8023, 879-5999.

387 - VOLUNTEERS

Be Stimulated! The Montreal Neurological Hospital Student Volunteer Programme is starting up again. If you are interested in volunteering please come to the meeting on Thursday 9/30, 4:00 Amphitheater, 1st floor M.N.H. (3801 Univ. St.) For more info. call Elsie or Kerry 933-2430.

The Yellow Door needs volunteers to do visiting and accompaniment (to appointments) for elderly people in the McGill and downtown area. If you are interested, call 392-6742.

389 - MUSICIANS WANTED

Chateaugay - St. Andrew's United Church at Church & Dupont Streets, requires an organist. Contact Dave Cessford after 6:00 p.m. at 691-7232.

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Today from 5:00 - 7:30 pm. Sponsored by SHOPSY'S HOT DOGS & POM BAKERIES

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